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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Baoning Zong

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EXAMINER

WOOD, ELIZABETH D

ART UNIT

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1793

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,965	Applicant(s) ZONG ET AL.	
	Examiner Elizabeth D. Wood	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39-51, 65 and 67-77 is/are pending in the application.
- 4a) Of the above claim(s) 65 and 67-77 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Specification

The examiner has not checked the specification to the extent necessary to determine the presence of **all** possible minor errors (grammatical, typographical and idiomatic). Cooperation of the applicant(s) is requested in correcting any errors of which applicant(s) may become aware of in the specification, in the claims and in any future amendment(s) that applicant(s) may file.

Applicant(s) is also requested to complete the status of any copending applications referred to in the specification by their Attorney Docket Number or Application Serial Number, **if any**.

The status of the parent application(s) and/or any other application(s) cross-referenced to this application, if **any**, should be updated in a timely manner.

Applicant's statement that the substitute specification filed with the application is Noted and the specification has been entered.

Election/Restriction

Newly amended claim 65 and newly submitted claims 67-77 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The inventions are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process

(MPEP § 806.05(f)). In the instant case the composition as claimed has utility for materially different processes such as the conversion of olefins into olefin oxides.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 65 and 67-77 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Applicant's comments regarding "contrary to the Office Actions assertion", since no restriction requirement was made previously, all claims must be examined are in error. The examiner is under **NO** obligation to treat non-statutory claims except to reject them as such. A restriction requirement is not made until claims are presented in proper statutory format. And as they were not so presented in the application as filed, they are properly withdrawn from consideration now as applicant has already received an action on the merits for the properly presented claims. There is no reason why applicant could not have provided statutory process claims by preliminary amendment at the time the application was filed.

Claim Rejections - 35 USC § 112

The rejection of the claims under the first paragraph of 35 USC is withdrawn because the claims now recite molecular sieves, which recitation is consistent with the requirements of the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 39-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims as amended are indefinite with respect to the term “molecular sieves” because it renders the remainder of the claim internally inconsistent. The invention requires molecular sieves in the plural; therefore it is improper to recite later in the claims “wherein the sieve ha a molecular sieve skeleton”. The claim should refer “one of the sieves” or some other appropriate terminology to provide consistent antecedent basis in the claim. All of the dependent claims that recite molecular sieve in the singular should indicate that if refers to one of the sieves in the singular or to both.

Claim 43 recites wherein “the molecular sieves is at least one of...”. This claim also confusing because it should recite either that “at leas one of the molecular sieves is” or “the molecular sieves are selected from”.

Further confusion has been introduced by the recitation of zeolite in the independent claim. Considering the specification, a catalyst, for example, that is representative of the invention is a composition containing VAPO-5, REUSY, silica sol and kaolin. There are two molecular sieves. What is representative of the zeolite? If such is the REUSY, the claims are still inconsistent with the specification and lack clarity. It is suggested that applicant employ the terminology “a component comprising molecular sieve or mixtures thereof with vanadium incorporated into the molecular sieve skeleton”, and a “second component comprising an active zeolite component”, and so forth, because the

claims as presented are completely unclear, PARTICULARLY when compared to the invention of the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 39-43, 46-48, 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,814,316 to Pellet et al.

Pellet et al. disclose a composite catalyst composition that can contain a zeolitic material such as various forms of zeolite Y. The material also contains a non-zeolitic molecular sieve material. This material is disclosed as including, for example "ELAPO" materials, wherein the "EL" can include vanadium which is present in the framework of the molecular sieve. This material can be composited further with a matrix or binder, which reads on the herein claimed "supporter". See particularly columns 3, 5, 29, 30 and 38.

Claims 39-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,855,864 to Pinnavaia et al.

The instantly claimed invention is directed to a composition comprising a molecular sieve having vanadium incorporated into the skeleton. The prior art reference discloses known compositions VS-1, VS-2 and VAPO materials. These read directly on the molecular sieves of the claimed process. Although the reference doesn't describe desulfurization, such would be an inherent characteristic of the material and would therefore naturally flow from the prior art disclosure. The reference further teaches that the compositions may be modified by combining them with other zeolites, clays, oxides and so forth to prepare various materials such as catalysts and adsorbents, because the accessible mesopore framework of the material lends itself to various disclosed

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catalytic and adsorbent utilities (of which desulfurization would be a species). The amounts of effective components are clearly art-recognized variables the skilled artisan would be expected to manipulate to advantage, depending on the final intended use of the composition. With respect to support materials, it is considered that the skilled artisan would introduce such as desired and for their intended purpose, i.e. stabilization, strength, ease of separation, and increasing surface area for catalytic phenomena and the addition of a known catalyst to a support does not constitute a patentable improvement in the art. The suggested combination with "oxides" is also considered to direct the artisan to the employment of known supports and binders for known purposes. See particularly the Detailed Description of the invention.

Response to Arguments

Applicant's arguments filed December 310, 2007 have been fully considered but they are moot in view of the new grounds of rejection.

Conclusion

Applicants are advised that any evidence to be provided under 37 CFR 1.131 or 1.132 and any amendments to the claims and specification should be submitted prior to final rejection to be considered timely. It is anticipated that the next office action will be a final rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth D. Wood whose telephone number is 571-272-1377. The examiner can normally be reached on M-F, 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth D. Wood/
Primary Examiner, Art Unit 1793

/E. D. W./
Primary Examiner, Art Unit 1793